

## A NEW SPECIES OF THE GENUS MYRMECINA CURTIS, 1829 (HYMENOPTERA, FORMICIDAE) FROM HUNAN PROVINCE, CHINA

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**Abstract** A new species of the genus *Mymecina* Curtis, *M. pauca* sp. nov., is described. The new species is similar to *M. graminicola* (Latreille), but can be distinguished from the latter by its 11-segmented antennae, scape cylindrical at base, more strong longitudinal rugulae on the dorsum of alitrunk, especially the one running throughout the middle of the dorsum. Furthermore, the 11-segmented antennae can separate the new species from all known *Mymecina* species in the world.

**Key words** Hymenoptera, Formicidae, *Mymecina*, new species, China.

### Introduction

The ant genus *Mymecina* Curtis, 1829 is a moderate-sized genus in subfamily Myrmicinae. Bolton (1995) listed 26 species and 7 subspecies of this genus in his world ant catalogue. Four years later, Rigato (1999) synonymized 3 subspecies, i. e. *M. graminicola* dentata Santschi, *M. graminicola* gotlandica Karavaiev and *M. graminicola* oelandica Karavaiev, with *M. graminicola* (Latreille), raised *M. atlantis* Santschi to specific status, and described a new species, *M. melonii* Rigato. With the subsequent addition of *M. urbanii* Tiwari, *M. viduae* Tiwari (Tiwari, 1994), *M. amamiana* Terayama, *M. ryukyuensis* Terayama (Terayama, 1996), *M. strigis* Lin & Wu (Lin and Wu, 1998) and *M. guangxiensis* Zhou (Zhou, 2001), 34 species and 3 subspecies of the genus are known in the world. The genus has the highest diversity in Indo-Australian Region (14 species and 1 subspecies), followed by the second in Oriental Region (8 species and 1 subspecies) and then in Palaearctic Region (7 species and 1 subspecies). Besides, 3 species were described from Australian Region, 1 species from Nearctic Region and 1 species from Neotropical Region.

In China, Forel (1912) described the first species, *M. sauteri*, from eastern Taiwan. Wheeler (1921) added *M. graminicola* sinensis to Chinese ant fauna. No more *Mymecina* species had been found in China for a long time until the descriptions of *M. taiwana* by Terayama (1985), *M. strigis* by Lin et Wu (1998) and *M. guangxiensis* by Zhou (2001). With the discovery of *M. striata* Emery and *M. graminicola* (Latreille) in Guangxi and Yunnan (Zhou, 2001; Xu, 2002), the number of Chinese species of the genus has added up to 7 species (including one subspecies). In this paper, we describe an interesting new species with 11 antennal segments. The type specimens are deposited in the Insect

Collection, College of Life Science, Guangxi Normal University, Guilin, China and the California Academy of Sciences, San Francisco, USA, respectively.

Standard measurements and indices used in this paper mainly follow Terayama (1985): TL (total length), HL (head length), HW (head width), CI (cephalic index), SL (scape length), SI (scape index), PW (pronotal width), AL (alitrunk length), EL (eye length), PL (petiole length), PH (petiole height), PNW (petiolar node width), PPL (postpetiole length), PPH (postpetiole height), PPW (postpetiolar node width).

*Myrmecina pauca* sp. nov. (Figs. 1-6)

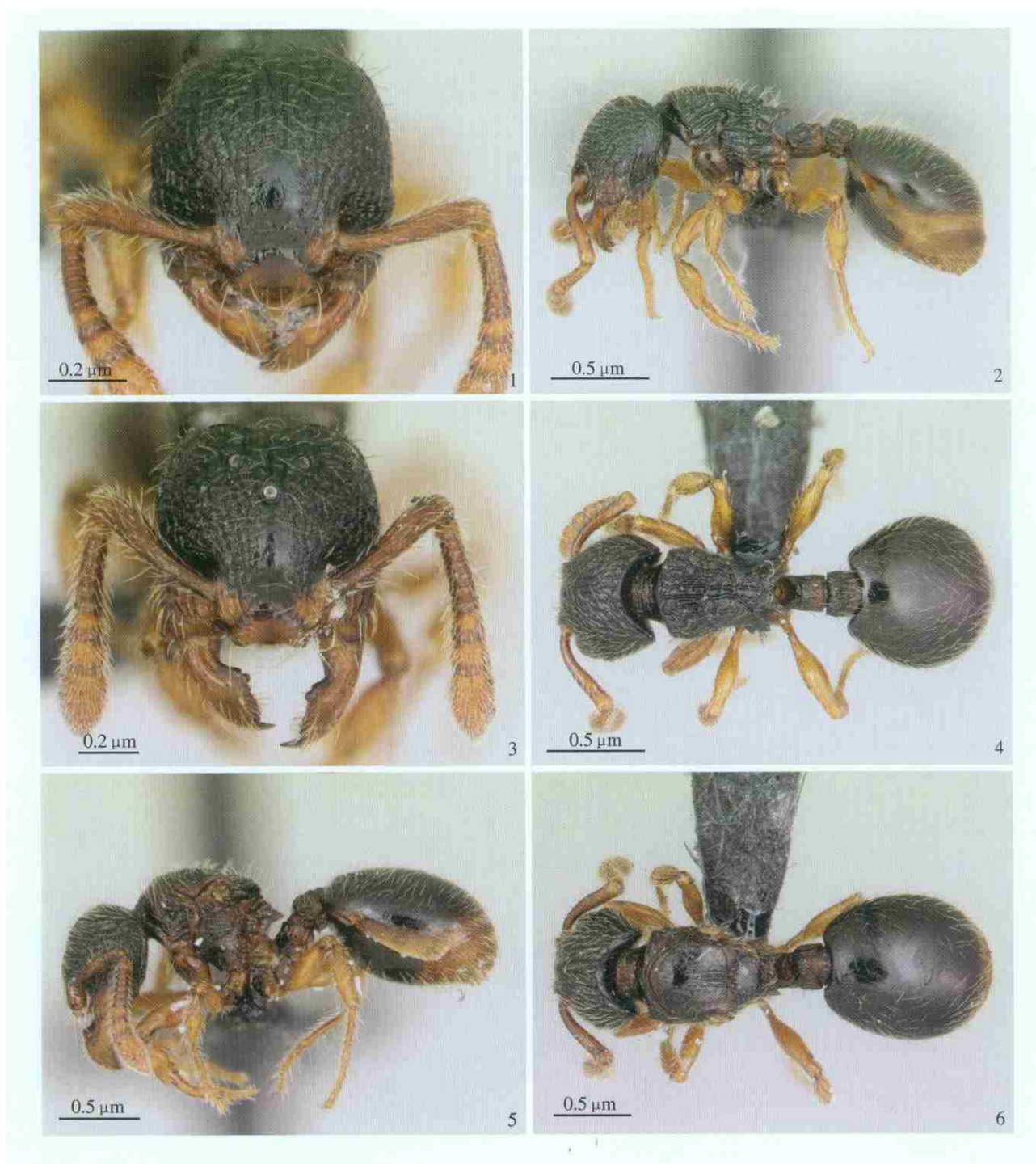
Holotype worker TL 2.98, HL 0.67, HW 0.67, CI 100, SL 0.46, SI 68, PW 0.48, AL 0.74, EL 0.11, PL 0.22, PH 0.22, PNW 0.20, PPL 0.17, PPH 0.22, PPW 0.24.

Head rectangular, with slightly concave posterior margin and convex sides. Occipital carina well developed, extending to ventral surface. Antennae 11-segmented, scapes reaching to occipital corners, cylindrical at base, distinctly thinner than at apex in posterodorsal view. Clypeus with median portion somewhat depressed, anterior margin slightly concave, with a small median clypeal tooth and a pair of lateral angles. Mandibles stout, subtriangular, masticatory margin armed with two large teeth at apex and followed by a series of indistinct blunt denticles. Eyes moderate large, situated laterally and anterior to the midpoint of lateral sides of head, consisted of about 10 ommatidia, maximum diameter 0.11 mm. Dorsum of alitrunk with distinct lateral margins, nearly flattened, slightly convex in profile view, narrowing posteriorly in dorsal view, lateral sides vertical and slightly concave, anteroventral pronotal corner forming an obtuse angle. Anterolateral

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Figs. 1-6 *Mymecina pauca* sp. nov. 1-3. Holotype worker. 4-6. Paratype female. 1, 4. Head in full face view. 2, 5. Body in profile view. 3, 6. Body in dorsal view.

corners of propodeum with distinct triangular teeth, declivity concave. Propodeal spines large, slightly longer than their basal width, posteriorly pointed, with slightly up-curved tips. Legs with femora and tibiae incrassate in the middle. Petiole cylindrical, longer than broad, with truncate and concave anterior surface, without distinct anterior peduncle, petiolar node with a distinct cross ridge. Postpetiole transverse, broader than long and shorter than petiole in dorsal view. Subpetiolar process

small, tooth-like. Gaster broadly oval.

Mandibles, clypeus, legs, declivity of propodeum, anterior surface of petiole and gaster smooth and shining. Antennal scape with fine and longitudinal rugulae. Head longitudinally and irregularly rugulose, with reticulate-punctulate ground sculpture, except an oval frontal area feebly reticulate but still lustrous. Dorsum of alitrunk with strong longitudinal rugulae, the median one running throughout the dorsum and the others along the side of it

diverging anteriorly. Lateral sides of pronotum with four to five longitudinal rugulae, but the rugulae at the sides of mesonotum and propodeum a little more irregular. Petiole and postpetiole broadly and longitudinally rugulose above and at sides. Body covered with abundant pale golden erect or suberect hairs, pubescence absent except on the flagella of antennae. Body blackish brown. Mandibles, clypeus, genae, antennae, legs, ventral surface of petiole and postpetiole, and apex of gaster yellowish brown.

Paratype worker. TL 2.78-2.98, HL 0.65-0.67, HW 0.63-0.67, CI 94-100, SL 0.46-0.50, SI 68-77, PW 0.46-0.50, AL 0.72-0.74, EL 0.09-0.11, PL 0.20-0.22, PH 0.20-0.22, PNW 0.20-0.22, PPL 0.15-0.17, PPH 0.20-0.22, PPW 0.24-0.26 (5 specimens measured).

Paratype female. TL 3.35-3.59, HL 1.05-1.10, HW 1.05-1.12, CI 100-102, SL 0.88-0.90, SI 80-84, PW 0.73-0.83, AL 1.12-1.14, EL 0.29-0.31, PL 0.30-0.35, PH 0.29-0.33, PNW 0.29-0.33, PPL 0.20-0.22, PPH 0.24-0.26, PPW 0.26-0.28.

Similar to worker. Head with three ocelli, coarsely rugose. Eyes large and protruding, consisting of decades of facets. Pronotum narrow, transverse and rugulose, forming anterior surface of alitrunk. Mesonotum forming the majority of dorsum of alitrunk, with several longitudinal carinae in the middle portion near the posterior margin, and three shining areas, one in the front, and the other two in sides of posterior border. Metanotum with a shining patch in the middle and a series of short longitudinal carinae near the anterior margin. Sutures on alitrunk well developed. Propodeal spines short, stout and triangular, with pointed apex.

Holotype. Worker, Bamianshan Nature Reserve, Guidong County, Hunan Province, China (26°02' N, 113°45' E), 14 June 2004, collected by HUANG Jian-Hua.

Paratypes: 3 workers, from the same nest of holotype; 1 worker, Yuankou Nature Reserve, Jiangyong County, Hunan Province, China (24°58' N, 111°06' E), 23 Sep. 2003, collected by HUANG Jian-Hua; 1 worker, Taoyuandong Nature Reserve, Yanling County, Hunan Province, China (26°30' N, 114°06' E), 24 Sep. 2003; 1 female, Hengshan Nature Reserve, Hengyang City, Hunan Province, China (27°17' N, 112°41' E), 8 Sep. 2003, collected by HUANG Jian-Hua; 1 female, Heimifeng Forest Park, Wangcheng County, Hunan Province, China (28°25' N, 113°02'

E), 12 Sep. 2003, collected by HUANG Jian-Hua; 1 female, Hongmenchong Nature Reserve (Mujiao Town), Tongdao County, Hunan Province, China (26°18' N, 109°54' E), 25 July 2004, collected by HUANG Jian-Hua.

Etymology. The species is named from the Latin word "paucus" (few), referring to its reduced number of antennal segments.

This new species is similar to *M. graminicola* (Latreille), but can be distinguished from the latter by its 11-segmented antennae, scape cylindrical at base, more strong longitudinal rugulae on the dorsum of alitrunk, especially the broad sulcus running throughout the middle of the dorsum. Furthermore, the 11-segmented antennae can separate the new species from all known *Mymecina* species in the world.

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## 中国湖南切叶蚁属一新种 (膜翅目, 蚁科)

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**摘 要** 描述中国湖南省切叶蚁属 *Mymecina* Curtis 1 新种, 即少节切叶蚁 *M. pauca* sp. nov.。新种与食草切叶蚁 *M. graminicola* (Latreille) 相似, 但触角只有 11 节, 柄节基部圆柱形, 并腹胸背面及侧面纵皱纹明显较粗, 背面中央有 1 条宽的纵沟贯穿全长。目前世界切叶蚁属所有已知种类的触角均为 12 节, 但新种的触角只有 11 节, 所以很容易与同属的所有种类相区别。

正模 工蚁, 湖南省桂东县八面山自然保护区, 2004-06-14, 黄建华采。副模: 3 工蚁, 与正模同巢采集; 1 工蚁, 湖

**关键词** 膜翅目, 蚁科, 切叶蚁属, 新种, 中国.

**中图分类号** Q969.554.2

南省江永县源口自然保护区, 2003-09-23, 黄建华采; 1 工蚁, 湖南省炎陵县桃源洞自然保护区, 2003-09-24, 黄建华采; 1 雌蚁, 湖南省衡阳市衡山自然保护区, 2003-09-08, 黄建华采; 1 雌蚁, 湖南省望城县黑麋峰森林公园, 2003-09-12, 黄建华采; 1 雌蚁, 湖南省通道县木脚乡宏门冲自然保护区, 2004-07-25, 黄建华采。

词源: 新种以拉丁词 “paucus” (少) 命名, 以显示其“触角节数比该属其它已知种少”这一重要鉴别特征。

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